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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/715,175

11/17/2003

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EXAMINER

NGUYEN, HUONG Q

ART UNIT

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3736

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/715,175	Applicant(s) PASKE ET AL.	
	Examiner HELEN NGUYEN	Art Unit 3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the reply filed 12/7/2007. Claims 17-27 are pending and under prosecution.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 17-26** are rejected under 35 U.S.C. 102(b) as being anticipated by Paske (US Pat No. 6231525).

4. In regards to **Claim 17**, Paske discloses a method of determining the presence or absence of neural, muscular, soft tissue, bone or joint damage to the wrist complex comprising the steps of: (a) engaging slick contact points 10, 11, 12 on a fixture 18, best seen in Figure 1, with at least one digit innervated by the ulnar nerve and at least one digit innervated by the median nerve, wherein the contact points are configured to transmit forces normal to their surface; (b) applying force on said slick contact points with said digits; and (c) measuring the force applied to at least two of said slick contact points to provide quantifiable outputs therefor, wherein the outputs are used to diagnose wrist complex diseases and injuries (Col.10, line 52-67; Col.11, line 1-5), wherein slick is defined as smooth (www.dictionary.com) and from at least Figure 1 it appears that said contact points are smooth and thus slick.

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5. In regards to **Claim 18**, Paske discloses the quantifiable outputs representing the forces applied by at least two digits innervated by different nerves are displayed, such as in Figure 5b.

6. In regards to **Claim 19**, Paske discloses the outputs are displayed as a function selected from the group consisting of time, frequency, phase, and any combination thereof, such as in Figure 4a and 4b.

7. In regards to **Claim 20**, Paske discloses the measurements are processed by a computer for storage or immediate use (Col.6, line 66-67; Col.7, line 1).

8. In regards to **Claim 21**, Paske discloses the diseases and injuries are diagnosed using a technique selected from the group consisting of pattern recognition, neural networks, frequency analysis, phase analysis, signature analysis, graphic displays, and any combination thereof (Col.9, line 1-7).

9. In regards to **Claim 22**, Paske discloses the measurements are compared to earlier measurements at a frequency selected from the group consisting of hourly, daily, weekly, yearly and any combination thereof to determine long term effects of said diseases or injuries (Col.5, line 7-10).

10. In regards to **Claim 23**, Paske discloses the force is applied to said slick contact points for a prolonged period of time (Col.11, line 6-7).

11. In regards to **Claim 24**, Paske discloses the force is applied repeatedly to said slick contact points (Col.7, line 6-10).

12. In regards to **Claim 25**, Paske discloses a visual or audible signal is produced when force should be applied to said slick contact points (Col.12, line 3-5).

13. In regards to **Claim 26**, Paske discloses said slick contact points allow displacement measurements to be made (Col.4, line 65-67; Col.5, line 1-3).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. **Claims 17-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Paske (US Pat No. 6231525) in view of Martin et al (US Pat No. 5340067) or Willems et al (US Pub No. 20040103745).

16. In regards to **Claim 17**, Paske discloses a method of determining the presence or absence of neural, muscular, soft tissue, bone or joint damage to the wrist complex comprising the steps of: (a) engaging contact points on a fixture 18, best seen in Figure 1, with at least one digit innervated by the ulnar nerve and at least one digit innervated by the median nerve, wherein the

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contact points are configured to transmit forces normal to their surface; (b) applying force on the contact points with said digits; and (c) measuring the force applied to at least two of said contact points to provide quantifiable outputs therefor, wherein the outputs are used to diagnose wrist complex diseases and injuries (Col.10, line 52-67; Col.11, line 1-5).

17. However, Paske does not disclose the contact points on the fixture as slick. Martin et al teach that surfaces that are not slick or have increased friction are easier to grip in the hand, thus decreasing the amount of force required to perform the required gripping task (Col.4: 21-25). Similarly, Willems et al teach that surfaces that are more slick or have decreased friction increase pressure and force on the contact points of the hand by reducing the leverage gained from mechanical advantage (§0006). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the contact points on the fixture of Paske slick or frictionless as taught by Martin et al or Willems et al to prevent the test subject from using the advantage gained from a frictional surface to apply more force than the subject's digits are actually capable of, thus skewing the test results.

18. In regards to **Claim 18**, Paske discloses the quantifiable outputs representing the forces applied by at least two digits innervated by different nerves are displayed, such as in Figure 5b.

19. In regards to **Claim 19**, Paske discloses the outputs are displayed as a function selected from the group consisting of time, frequency, phase, and any combination thereof, such as in Figure 4a and 4b.

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20. In regards to **Claim 20**, Paske discloses the measurements are processed by a computer for storage or immediate use (Col.6, line 66-67; Col.7, line 1).

21. In regards to **Claim 21**, Paske discloses the diseases and injuries are diagnosed using a technique selected from the group consisting of pattern recognition, neural networks, frequency analysis, phase analysis, signature analysis, graphic displays, and any combination thereof (Col.9, line 1-7).

22. In regards to **Claim 22**, Paske discloses the measurements are compared to earlier measurements at a frequency selected from the group consisting of hourly, daily, weekly, yearly and any combination thereof to determine long term effects of said diseases or injuries (Col.5, line 7-10).

23. In regards to **Claim 23**, Paske as modified by Martin et al or Willems et al disclose the force is applied to said slick contact points for a prolonged period of time (Col.11, line 6-7).

24. In regards to **Claim 24**, Paske as modified by Martin et al or Willems et al disclose the force is applied repeatedly to said slick contact points (Col.7, line 6-10).

25. In regards to **Claim 25**, Paske as modified by Martin et al or Willems et al disclose a visual or audible signal is produced when force should be applied to said slick contact points (Paske Col.12, line 3-5).

26. In regards to **Claim 26**, Paske as modified by Martin et al or Willems et al disclose said slick contact points allow displacement measurements to be made (Col.4, line 65-67; Col.5, line 1-3).

27. **Claim 27** is rejected under 35 U.S.C. 103(a) as being unpatentable over Paske or Paske in view of Martin et al or Willems et al.

28. Paske alone or in combination with Martin et al or Willems et al as modified above disclose applying a force normal to the surface of the slick contact points attached to a fixture (18) but do not explicitly disclose said normal force as 70% of the total force. However, because Paske as modified by discloses applying normal force and applicant has not expressed criticality in the specification as to the amount of normal force applied in relation to the total force, it seems that any amount of normal force would be sufficient in the operation of said invention. Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Paske such that the normal force applied to the surface of the contact points is at least 70% of the total force because such modification would have been considered a mere design consideration which fails to patentably distinguish over Paske.

Response to Arguments

29. Applicant's arguments filed 8/9/2007 have been fully considered but they are not persuasive. Applicant contends that the combination of Paske as modified by Martin et al or Willems et al is not proper because neither reference addresses the teachings of Paske for accurately measuring applied forces. However, it is noted that Martin et al and Willems et al

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both discuss the general effects of friction in gripping various articles with the hand and similarly, Paske teaches the fixture gripped by the hand. Therefore, when applied to the context of accurately measuring applied forces from the hand, it would have been obvious to one of ordinary skill in the art to modify Paske such that said contact points on said fixture experience no friction, i.e. are slick, to prevent the test subject from using the advantage gained from a frictional surface to apply more force than the subject's digits are actually capable of, thus skewing the test results as explained above. Thus, by reducing the improper advantage gained from friction or a non-slick surface, modifying Paske such that said contact points on said fixture are slick does in fact aid Paske in a more accurate measurement of the applied force. Therefore, it is maintained that the above rejection of Paske in view of Martin et al or Willems et al is proper. It is also noted that although Martin et al and Willems et al teach that a high friction surface would increase force, it would then be obvious to one of ordinary skill in the art that the opposite would thus be true, mainly that by providing a slick surface, extra force would not be used by the test subject as elaborated above during the method involving the fixture.

30. Applicant also contends that Martin et al and Willems et al allegedly concern generating a side force while Paske concerns eliminating side loads and thus the combination of Paske with Martin et al and Willems et al would defeat the purpose of Paske. However, it is noted since Martin et al and Willems et al have simply been relied upon for the teachings of the general effects of friction on forces applied by the hand as used in the manner above, any arguments pertaining to side loads are irrelevant, particularly because such limitations are not even recited in the claims.

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31. Furthermore, it is noted that it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELEN NGUYEN whose telephone number is (571)272-8340. The examiner can normally be reached on Monday - Friday, 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on 571-272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/H. N./
Examiner, Art Unit 3736

/Max Hindenburg/
Supervisory Patent Examiner, Art Unit 3736